AMENDMENTS TO THE SPECIFICATION

[0022] The oleaginous fluid used in the emulsion compositions of the present invention may comprise any oil-based fluids suitable for use in emulsions. The oleaginous fluid may be from a natural or synthetic source. Examples of suitable oleaginous fluids include without limitation diesel oils, crude oils, paraffin oils, mineral oils, low toxicity mineral oils, olefins, esters, amides, amines, synthetic oils such as polyolefins, polydiorganosiloxanes, siloxanes, organosiloxanes and combinations thereof, ethers, acetals, dialkylcarbonates, hydrocarbons and combinations thereof. Additional examples of suitable oleaginous fluids include without limitation those commercially available from Halliburton Energy Services, Inc., in Houston, Texas and/or Duncan, Oklahoma, in association with the trademarks "ACCOLADE® internal olefin and ester blend invert emulsion base fluid," "PETROFREE® ester based invert emulsion base fluid," "PETROFREE® LV ester based invert emulsion base fluid," and "PETROFREE® S.F internal olefin based invert emulsion base fluid." Factors that determine which oleaginous fluid will be used in a particular application, include but are not limited to, the cost and performance characteristics of the oleaginous fluid. An additional factor that may be considered is the polarity of the oleaginous fluid. For example, diesel oils are generally more polar than paraffin oils. Other factors that may be considered are environmental compatibility and regional drilling practices. For example, in North Sea applications, an ester or internal olefin (IO) may be preferred. In the Gulf of Mexico, applications may prefer to utilize "ACCOLADE®" fluid or a low toxicity mineral oil. One skilled in the art with the benefit of this disclosure will be able to choose a suitable oleaginous fluid for a particular application in view of these considerations.

[0024] The emulsion compositions of the present invention further comprise a polymer based emulsion stabilizing agent (or a non-surfactant polymeric emulsifier) having hydrophobic moieties and hydrophilic moieties and the ability to emulsify or to stabilize emulsions of oil in water or water in oil. Suitable polymers include, but are not limited to, homopolymers, copolymers, terpolymers, and hydrophobically modified copolymers. Examples of suitable commercially available polymers include "ALCOSPERSE® 747" polymer (an ethylacrylate/methacrylic acid polymer of roughly 100,000 molecular weight hydrophobically modified with long chain fatty acid alcohol ethoxylates), and "ALCOQUEST® 747" polymer (an ethylacrylate/methacrylic acid polymer of roughly 100,000 molecular weight hydrophobically modified with long chain fatty acid alcohol ethoxylates), and EXP 3833™ acrylate copolymer, all available from Alco-Chemical, a group of Imperial Chemical Industries PLC, in Chattanooga, Tennessee. Polymers are generally readily available, of reasonable cost, and provide ease of handling. Any commercially available polymers having hydrophobic moieties and hydrophilic moieties may be tested and adjusted for use in a particular drilling or treatment fluid according to the present invention. Adding salts or modifying the pH of the fluid can improve or reduce the emulsion stabilizing effect of the polymer, depending on the structure and composition of the polymer. The polymer will provide the most stable emulsion when its hydrophobic and hydrophilic moieties are well balanced for the intended purpose of the emulsion, as previously discussed. Preferably, the polymer will be non-reactive with the subterranean formation and will be compatible with other components comprising the drilling fluid or well treatment fluid.

[0042] Five polymer samples were used to prepare emulsions using the following procedure. In each of 5 mixing cups, 180 g. SF BASE™ oleaginous fluid, available from Halliburton Energy Services, Inc. in Houston, Texas, was provided. To this fluid was added 10 ml of a polymer sample and mixed on a multimixer. After mixing, 150 ml water was added and each sample was mixed again for 20 minutes. The polymer samples were observed and then allowed to stand overnight. Calcium chloride (30 g) was then added to each sample and the samples were mixed for 20 minutes on a multimixer. The polymer samples used are listed in the table below. Each polymer is available from Alco-Chemical, a group of Imperial Chemical Industries PLC, in Chattanooga, Tennessee.

Polymeric Material	**1:1 Oil to Water Ratio, using SFBASE™ oil**
ALCOQUM® L344 polymer	Water-in-oil emulsion formed but weak and brittle with water break out.
ALCOGUM® SL 920 polymer	No emulsion.
ALCOGUM® SL 117 polymer	Water-in-oil emulsion formed but weak and brittle with water break out.
ALCOSPERSE® 747 polymer	No emulsion.
EXP 3833™ polymer	No emulsion.
Calcium chloride (30 g) added	
ALCOQUM® L344 polymer	No change, still weak, brittle water-in-oil emulsion.
ALCOGUM® SL 920 polymer	Weak water-in-oil emulsion.
ALCOGUM® SL 117 polymer	No change, still weak, brittle water-in-oil emulsion.
ALCOSPERSE® 747 polymer	Very good oil-in-water emulsion.
EXP 3833™ polymer	Very good oil-in-water emulsion.

Wherein ALCOGUM® L344, ALCOGUM® SL920 and ALCOGUM® SL117 are ethylacrylate/methacrylic acid polymers of roughly 100,000 mw hydrophobically modified with long chain fatty alcohol ethoxylates and ALCOSPERSE® 747 and EXP 3833° are stryene-acrylic acid polymers of approximately 3000 mw.